DEPT. CST COURSE NUMBER: 1440

NUMBER OF CREDITS: 2 lecture 1 lab for a total of 3 credits

COURSE TITLE: Advanced Telecommunications

CATALOG DESCRIPTION:
This course will expand on the theory and topics from the Telecommunications I class including field experience with central office equipment and cabling. Students will work with broadband communications access systems and software and deploy services over fiber- and copper-based network architectures. In addition, students will become familiar with federal and state regulations and organizations related to the telecommunications industry.

AUDIENCE: Telecommunications Technology Students, Computer Support Technology students, Networking Specialist students and anyone interested in learning about the telecommunications industry.

FULFILLS MN TRANSFER CURRICULUM AREA(S)
Does not apply

PREREQUISITES OR NECESSARY ENTRY SKILLS/KNOWLEDGE:
CST 1400 Telecommunications I

LENGTH OF COURSE: 2 lecture hours and 1 lab hour per week for 16 weeks

THIS COURSE IS USUALLY OFFERED:
Every other year ☐ fall ☐ spring X summer ☐ undetermined ☐

Four goals are emphasized in course at Minnesota West Community & Technical College:

1) ACADEMIC CONTENT: The academic objectives of this course are:
   a. The student will achieve an entry level of knowledge and skill needed for telecommunications personnel

2) THINKING SKILLS: This course will help students improve the effectiveness of their thinking skills through:
   a. The student will develop logical thinking skills by mastering the telecommunications curriculum.

3) COMMUNICATIONS SKILLS: This course will help students improve their oral and written communication skills through:
   a. Completing written and oral assignments journal and documenting lab configuration.

4) HUMAN DIVERSITY: This course will help students recognize, understand, and appreciate human diversity through:
   a. The student will gain self-awareness regarding their feelings towards people of different cultures, educational backgrounds, value systems and socioeconomic status
TOPICS TO BE COVERED:
1. Data center equipment
2. Outside plant
3. Fiber optic networks
4. Legacy equipment
5. Data Center software applications
6. Telecommunication regulations
7. Telecommunications organizations
8. Telecommunications Certification

LIST OF EXPECTED COURSE OUTCOMES:
1. Identify data center equipment
2. Explain a data center network
3. Identify outside plant equipment
4. Explain the how the outside plant integrates with the data center
5. Connect outside plant components
6. Setup data center equipment
7. Configure data center hardware and software
8. Describe telecommunications regulations
9. Identify telecommunications organizations
10. Identify telecommunications certification
11. Perform troubleshooting of outside plant technology
12. Perform troubleshooting of data center technology

LEARNING/TEACHING TECHNIQUES used in the course are:
- Collaborative Learning
- Problem Solving
- Student Presentations
- Interactive Lectures
- Creative Projects
- Individual Coaching
- Lecture
- Films/Videos/Slides
- Demonstrations
- Other (describe below)
- Lab

ASSIGNMENTS AND ASSESSMENTS FOR THIS CLASS INCLUDE:
- Reading
- Tests
- Individual Projects
- Oral Presentations
- Worksheets
- Collaborative Projects
- Textbook Problems
- Papers
- Portfolio
- Group Problems
- Term Paper
- Other (describe below)

The information in this course outline is subject to revision

Veteran Services: Minnesota West is dedicated to assisting veterans and eligible family members in achieving their educational goals efficiently. Active duty and reserve/guard military members should advise their instructor of all regularly scheduled military appointments and duties that conflict with scheduled course requirements. Instructors will make every effort to work with the student to identify adjusted timelines. If you are a veteran, please contact the Minnesota West Veterans Service Office.

To receive reasonable accommodations for a documented disability, please contact the campus Student Services Advisor or campus Disability Coordinator as arrangements must be made in advance. In addition, students are encouraged to notify their instructor.

This document is available in alternative formats to individuals with disabilities by contacting the Student Services Advisor or by calling 800-658-2330 or Minnesota Relay Service at 800-627-3529 or by using your preferred relay service.